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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/596,008

05/25/2006

Tomihisa Ohno

CONDA.00033

1688

22858 7590 05/04/2009  
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EXAMINER

DOLLINGER, MICHAEL M

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

05/04/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/596,008	<b>Applicant(s)</b> OHNO ET AL.	
	<b>Examiner</b> MICHAEL DOLLINGER	<b>Art Unit</b> 1796	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claimed ranges of hydroxyl number do not have any units. Hydroxyl number is not a dimensionless value. Typical hydroxyl number units are mg KOH/g.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

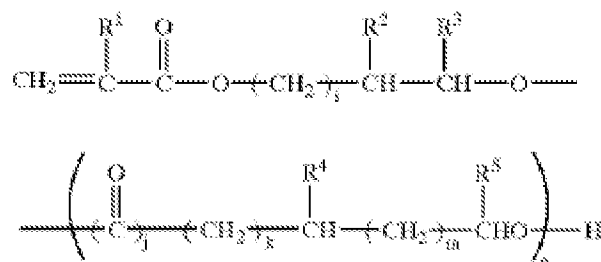
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4 and 6-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Hayakawa et al (WO 96/34064, hereinafter all references are made to the English language equivalent US 6,689,839 B1).
5. Hayakawa et al discloses a thermoset paint composition comprising (a) a fluorine containing copolymer of fluoro-olefin, hydroxyl group containing vinyl based monomer and other vinyl based monomer having a hydroxy group value between 60 and 150

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mgKOH/g [column 2 lines 34-39], (b) a vinyl based (co)polymer comprising a monomer represented by the general formula 1:



wherein  $n = 0-10$  and the (co)polymer has a hydroxy group value between 60 and 150 mgKOH/g [column 2 lines 40-46; 55-60], and (d) a blocked polyisocyanate compounds [column 2 lines 49-50]. The hydroxyl group containing vinyl based monomer of component (a) may be lactone modified 2-hydroxyalkyl (meth)acrylate, e.g.  $\epsilon$ -caprolactone modified 2-hydroxyethyl (meth)acrylate [column 4 lines 3-10]. The other vinyl based monomer of component (a) may be 2-hydroxyethyl (meth)acrylate [column 4 line 40] and monomers with a cyclic backbone such as cycloalkyl ester of (meth)acrylic acid [column 4 line 34], styrene [column 4 line 41], cyclohexyl vinyl ether [column 4 line 44], and combinations of two or more [column 4 line 46]. The monomer of component (b) represented by formula 1 is also a lactone modified vinyl based monomer such as modified 2-hydroxyalkyl (meth)acrylate, e.g.  $\epsilon$ -caprolactone modified 2-hydroxyethyl (meth)acrylate [column 5 lines 54-63]. Since  $n = 0-10$  in formula 1, there are between 0 and 10 caprolactone repetitive units in the lactone modified hydroxyalkyl (meth)acrylate. Other vinyl based monomers in component (b) include 2-hydroxyethyl (meth)acrylate [column 6 line 7] and monomer with a cyclic backbone including cycloalkyl ester of (meth)acrylic acid [column 6 line 1], styrene [column 6 line 7], and combinations of two

or more [column 6 line 10-12]. Components (a) and (b) each read on both the claimed (meth)acrylic resin (A) of claim 1 and the lactone polyol (C) of claim 5.

6. Regarding claim 3, the disclosure of caprolactone modified 2-hydroxyethyl (meth)acrylate is considered the explicit disclosure of caprolactone modified 2-hydroethyl methacrylate and caprolactone modified 2-hydroxyethyl acrylate.

7. Regarding claim 4, example polymers AC-2 and AC-3 have cyclohexyl methacrylate in the monomer mixture in an amount of 10 weight percent and 5 weight percent, respectively [Table 2].

8. Regarding claim 6, all examples of lactone modified (meth)acrylic resins AC-1 through AC-5 have acid value below 30 mgKOH/g [Table 2].

9. Regarding claims 8 and 9, the blocked polyisocyanate compounds are capable of forming urethane bonds [column 3 lines 9-10; 23-24]. In order to form urethane bonds the isocyanate groups must be "liberated" from the blocking agent. Additionally, curing of the coating composition occurs at elevated temperature for an extended period of time [column 8 lines 59-63] indicating a process of "liberating" the isocyanate functional groups from the blocking agents.

### ***Response to Arguments***

10. Applicant's arguments filed 02/10/2009 with respect to 35 USC § 112 rejection have been fully considered but they are not persuasive. Applicant argues that one skilled in the art would recognize that a hydroxyl number is a term that reflects the number of hydroxyl groups in a molecule. This argument is not convincing because this

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is not the understood definition of hydroxyl number. Hydroxyl number (synonymous with hydroxyl value) is the amount of hydroxyl groups in a sample, not in a molecule as Applicant has stated. The size of the sample is unknown when no units are provided; the units of mg KOH/g are the most commonly used units in the art. The number of hydroxyl groups in a molecule is the "hydroxyl functionality". Applicant is also advised not to be confused with "equivalent weight", which is the molecular weight of a sample or molecule present per functional group. More importantly, Applicant should avoid new matter issues when amending the claims comply with this rejection.

11. Applicant's arguments filed 02/10/2009 with respect to the rejection over Hayakawa et al (WO 96/34064) have been fully considered but they are not persuasive. Applicant argues that Hayakawa et al fail to disclose the claimed feature of amended claim 1 in which a lactone polyol (C) has three or more hydroxyl groups. This argument is not convincing because, as Examiner has already stated in the previous office action, the elements (a) and (b) of Hayakawa et al each read on the claimed lactone polyol (C) having three or more hydroxyl groups. Applicant has not made any arguments as to how these elements do not read on the claimed lactone polyol (C) and therefore has not addressed Examiner's *prima facie* case of anticipation.

12. Applicant's arguments, see page 8 paragraph 3 through page 10 final paragraph, filed 02/10/2009, with respect to all other prior art rejections have been fully considered and are persuasive. The rejections of 11/12/2008 have been withdrawn.

***Conclusion***

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL DOLLINGER whose telephone number is (571)270-5464. The examiner can normally be reached on Monday - Thursday 7:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Randy Gulakowski/  
Supervisory Patent Examiner, Art Unit 1796

MICHAEL DOLLINGER  
Examiner  
Art Unit 1796

/mmd/